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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/956,912	09/21/2001	Osamu Kakinuma	212903US3	2653

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EXAMINER
BOCHNA, DAVID

ART UNIT	PAPER NUMBER
3679	

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/956,912	KAKINUMA, OSAMU	
	Examiner	Art Unit	
	David E. Bochna	3679	

-- The MAILING DATE of this c mmunication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-22 and 24-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-22 and 24-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 23 and 28 are withdrawn in view of the newly discovered reference(s) to Japanese Patent 11,241,798 contained in the IDS submitted on 5/9/03. Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claim 24, 4th line from the bottom is objected to because of the following informalities: the phrase "the connecting pipes having an inner diameters other than" is grammatically incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11,241,798.

In regard to claim 19, Japanese Patent 11,241,798 discloses a branch pipe joint comprising:

A branch pipe joint body 8 having a hollow closed shape;

A plurality of communication ports 81 provided in the branch pipe joint body 8, the communication ports having the same inner diameter as each other;

a plurality of connecting pipes 9 through which refrigerant can separately flow, each

of the connecting pipes having one end portion firmly fixed (by threads) to the communication port 81 in a state of being fitted to the communication port and another end portion firmly fixed to one of the plurality of refrigerant pipes 71 having outer diameters of the multi-unit type air conditioner, the firmly fixing operation being performable at an installation site of the multi-unit type air conditioner in which another end portion is fitted to the one of the refrigerant pipes; and

a common communication port 82 through which the refrigerant can flow in a confluent state, the common communication port being provided in branch pipe joint body;

wherein the plurality of connecting pipes 9 each has one end portion fitted to one of the communication ports 81 and another end portion fitted to one of the refrigerant pipes, each of the one end portions having the same outer diameter, wherein a part of the communication ports is directly firmly fixed to a part of the refrigerant pipes without using the connecting pipes (see fig. 2 where pipes 8 are directly connected to communication ports 11 in a branch pipe 1). Japanese Patent 11,241,798 does not disclose that at least some of the other end portions of the connecting pipes have inner diameters different from each other. However, it would have been obvious to a person having ordinary skill in the art, at the time the invention was made to modify the inner diameters of the connecting pipes 9 to include different sizes because a change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

5. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11,241,798 in view of Worthen et al.. In regard to claims 20-21, Japanese Patent 11,241,798 discloses a branch pipe joint as described above. Japanese Patent 11,241,798 also discloses using threads in order to create a secure, leak-free connection. However, Japanese

Patent 11,241,798 does not disclose that the connecting pipes and pipes are welded or brazed to the branch pipe. Worthen et al. teaches welding or brazing the connecting pipes 11 and pipes 12 (see column 3, lines 52-56) to a branch pipe 6 in order to create a permanent, leak free connection. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the connections of Japanese Patent 11,241,798 to include welded or brazed joints, as taught by Worthen et al., in order to create a more secure and permanent leak free connections between the pipe joint members.

In regard to claim 22, Worthen et al. also teaches providing the pipe joint body with a Y-shape having two branched portions 30 and one root portion 10 to reduce the costs and difficulties in assembling traditional branched connections. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the connecting pipes of Japanese Patent 11,241,798 to include a Y-pipe, as taught by Worthen et al., so that assembly could be achieved more easily and at a cheaper cost.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11,241,798 in view of Worton.

In regard to claim 24, EPO Patent 0,036,984 discloses a method of connecting refrigerant pipes of a multi-unit type air conditioner, the method comprising the steps of:

preparing a branch pipe joint body 8 having a hollow shape and a plurality of communication ports 81 each having the same inner diameter;

selecting connecting pipes 9 from a group of connecting pipes at an installation site of the multi-unit type air conditioner, each of the selected connecting pipes having one end portion having an outer diameter enabling the one end portion to be fitted to the communication

ports 81 and another end portion having an inner diameter enabling the another end portion to be fitted to one of the plurality of the refrigerant pipes 71 having different outer diameters, said group of connecting pipes and branch pipe joint body having been packed in one package; and

connecting the branch pipe joint body to the refrigerant pipes through the selected connecting pipes using firm fixing (threads). However, Japanese Patent 11,241,798 does not disclose that the number of connecting pipes in the group of the connecting pipes is larger than the number of the communication ports, and is set such that a total number of the connecting pipes having a minimum inner diameter and a maximum inner diameter is smaller than a number of the connecting pipes having an inner diameters other than the minimum and maximum inner diameters, wherein a part of the communication ports is directly firmly fixed to a part of the refrigerant pipes without using the connecting pipes (see fig. 2 where pipes 8 are directly connected to communication ports 11 in a branch pipe 1). Worton teaches providing a connecting pipe adapter kit (see fig. 1) where the number of connecting pipes in the group of the connecting pipes (58, 60, 62, 64, 66, 68) is larger than the number of the communication ports 20, and is set such that a total number of the connecting pipes having a minimum inner diameter and a maximum inner diameter is smaller (66, 68) than a number of the connecting pipes having an inner diameters other than the minimum and maximum inner diameters (58, 60, 62, 64, 66, 68) so that the pipe joint 20 would be connectable to a plurality of pipe ends. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the connecting pipes of Japanese Patent 11,241,798 to include more connecting pipes than communication ports, as taught by Worton, so that the communication ports could be coupled with many different sized pipe ends.

7. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11,241,798 in view of Worton and further in view Worthen et al.. In regard to claims 25-26, Japanese Patent 11,241,798 in view of Worton discloses a branch pipe joint as described above. Japanese Patent 11,241,798 also discloses using threads in order to create a secure, leak-free connection. However, Japanese Patent 11,241,798 in view of Worton does not disclose that the connecting pipes and pipes are welded or brazed to the branch pipe. Worthen et al. teaches welding or brazing the connecting pipes 11 and pipes 12 (see column 3, lines 52-56) to a branch pipe 6 in order to create a permanent, leak free connection. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the connections of Japanese Patent 11,241,798 to include welded or brazed joints, as taught by Worthen et al., in order to create more secure, permanent, leak free connections between the pipe joint members.

In regard to claim 27, Worthen et al. also teaches providing the pipe joint body with a Y-shape having two branched portions 30 and one root portion 10 to reduce the costs and difficulties in assembling traditional branched connections. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the connecting pipes of EPO Patent 0,036,984 to include a Y-pipe, as taught by Worthen et al., so that assembly could be achieved more easily and at a cheaper cost.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Bochna whose telephone number is (703) 306-9040. The examiner can normally be reached on 8-5:30 Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

David Bochna
May 20, 2003